Conveyor Belt Science

The following question is based on the paper "Existence and Hardness of Conveyor Belts" by Molly Baird, Sara Billey, Erik Demaine, Martin Demaine, David Eppstein, Sándor Fekete, Graham Gordon, Sean Griffin, Joseph Mitchell, and Joshua Swanson published in Electronic Journal of Combinatorics, volume 27, number 4, 2020, Article P4.25, or `https://arxiv.org/abs/1908.07668`.

Question: Can you find a way to wrap a tight elastic band around the disks below in such a way that moving the band would rotate all of the disks if their location was fixed in the plane but they are free to spin on their centers? In order to prevent damage to the band, we require that the band does not cross itself or the interior of any disk? If so, which disks are inside the belt? If not, what prevents it?